FlyBy Math™ Alignment
North Dakota Mathematics Content and Achievement Standards
April 2005

Standard 1: Number and Operation
Students understand and use basic and advanced concepts of number and number systems.

NUMBERS, NUMBER RELATIONSHIPS, AND NUMBER SYSTEMS

Benchmark Expectations	***FlyBy Math*™ Activities**
7.1.1. Use ratios and proportions to represent relationships.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios. --Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.

COMPUTATIONAL FLUENCY AND ESTIMATION

Benchmark Expectations	***FlyBy Math*™ Activities**
7.1.8. Solve real-world problems using integers, fractions, decimals, and percents.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios. --Predict outcomes and explain results of mathematical models and experiments.
7.1.9. Estimate the results of problems involving fractions, decimals, and percents.	--Predict outcomes and explain results of mathematical models and experiments. --Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.
7.1.10. Use proportions to solve problems.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios. --Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates.

Standard 3: Data Analysis, Statistics and Probability
Students use data collection and analysis techniques, statistical methods, and probability to solve problems.

DATA COLLECTION, DISPLAY, AND INTERPRETATION

Benchmark Expectations	***FlyBy Math*™ Activities**
7.3.1. Formulate a question; collect, organize, and display data, using a bar, line, and circle graph.	--Conduct simulation and measurement for several aircraft conflict problems. --Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.

Standard 5: Algebra, Functions and Patterns Students use algebraic concepts, functions, patterns, and relationships to solve problems.	
PATTERNS, RELATIONS, AND FUNCTIONS	
Benchmark Expectations 7.5.1. Create tables and graphs to analyze and describe patterns.	***FlyBy Math*™ Activities** --Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system. --Use tables, graphs, and equations to solve aircraft conflict problems.
RATES OF CHANGE	
Benchmark Expectations 7.5.6. Graph change over time; e.g., growth, distance, population.	***FlyBy Math*™ Activities** --Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates. --Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.